

CLAIMS

1. A method in tail threading in a web-forming machine, in which a threading tail is formed from the web, and is transferred to the production section (10, 12 - 14) of a web-forming machine including a draw point (21), and in which method monitoring takes place of both the formation of the threading tail and its transfer to the draw point (21), which is at the start of the said production section (10, 12 - 14), and from which the threading tail is pulled in the tail threading towards a holding point (24) at the end of the production section (10, 12 - 14), characterized in that in the method the holding point (24) and its environment that terminates the tail threading of the production section (10, 12 - 14) in question are monitored in the method, in order to detect the threading tail at the holding point (24) and thus to determine the success of the tail threading.

2. A method according to Claim 1, characterized in that the formation of the threading tail and its transfer and the holding point are each monitored separately.

3. A method according to Claim 1 or 2, characterized in that, in addition, some other selected point on the relevant production section (10, 12 - 14) of the web-forming machine is monitored.

4. A method according to any of Claims 1 - 3, characterized in that the tail threading is monitored by imaging different points and storing the image information obtained in the imaging and display it synchronized at a particular point in the threading tail.

5. A method according to Claim 4, characterized in that when deviations appear in the tail threading, the location of the problem point is determined on the basis of the image information stored in the monitoring.

6. A method according to Claim 5, characterized in that the location of the problem point is determined on the basis of the distance of the progression threading tail calculated from the time-specific image information, which distance of progression is applied to the monitored production section (10, 12 - 14) of the web-forming machine.

7. An arrangement in tail threading in a web-forming machine, which web-forming machine includes

- 10 - sequential production sections (10, 12 - 14), in connection with the first production section (10, 12 - 14) of which there are cutting means (16) for cutting the threading tail from the web being formed on the web-forming machine,
- threading means (15) in the second production section (10, 12 - 14) for threading the threading tail over the production section (10, 12 - 14) in question, which threading means (15) form a draw point (21) at the start of the second production section (10, 12 - 14),
- transfer means (18) between the production sections (10, 12 - 14) for transferring the threading tail formed in the first production section (10, 12 - 14) to the threading means (15) of the second production section (10, 12 - 14),
- a holding point (24) at the end of the second production section (10, 12 - 14), to which the threading means (15) are arranged to extend, and
- control equipment (25) for controlling the means (15, 16, 18),

the arrangement further including

- camera devices (26) between the production sections (10, 12 - 14), for monitoring the formation of the threading tail and its transfer to the draw point (21), and
- memory devices (27) for storing the image information imaged using the camera devices (26) and displaying it in a desired manner,

35 characterized in that camera devices (26') are also arranged in connection with the draw point (24), for detecting the threading tail at the draw point (24) and thus for determining the

success of the tail threading, at which draw point (24) the tail threading of the second production section (10, 12 - 14) terminates.

5 8. An arrangement according to Claim 7, characterized in that the camera devices (26, 26') include three cameras (28 - 30), of which the first camera (26) is arranged in connection with the cutting means (16), the second camera (29) in connection with the draw point (21), and the third camera (30) in
10 connection with the holding point (24).

9. An arrangement according to Claim 8, characterized in that the camera devices (26, 26') include in addition a fourth camera (31), which is arranged to be set up at a selected point
15 in the relevant production section (10, 12 - 14) of the web-forming machine.

10. An arrangement according to any of Claims 7 - 9, characterized in that the memory devices (27) are connected to
20 the control equipment (25), in order to combine the properties of the production section (10, 12 - 14) of the web-forming machine and the image information.

11. An arrangement according to any of Claims 7 - 10,
25 characterized in that the camera devices (26, 26') in the various production sections (10, 12 - 14) of the web-forming machine are connected to the memory devices (27) arranged as a single totality.

30 12. An arrangement according to Claim 7 or 8, characterized in that each camera (28 - 31) is a digital camera, preferably a digital high-speed camera.